METHODS AND APPARATUS FOR IMPLEMENTING PARAMETERIZABLE PROCESSORS AND PERIPHERALS

Abstract of the Disclosure

Methods and apparatus are provided for implementing parameterizable processor cores and peripherals on a programmable chip. An input interface such as a wizard allows selection and parameterization of processor cores, peripherals, as well as other modules. The logic description for implementing the modules on a programmable chip can be dynamically generated, allowing extensive parameterization of various modules. Dynamic generation also allows the delivery of device driver logic onto a programmable chip. The logic description can include information for configuring a dynamically generated bus module to allow connectivity between the modules as well as connectivity with other on-chip and off-chip components. The logic description, possibly comprising HDL files, can then be automatically synthesized and provided to tools for downloading the logic description onto a programmable chip.